

I Claim:

1. A method for transmitting information contained in a transmission signal via at least one channel, the method which comprises the following steps, to be performed at a transmitter end:

generating at least one pulse sequence with at least one pulse as stipulated by the transmission signal;

outputting the pulse sequence to the at least one channel;

monitoring the channel for a presence of an interference signal; and

repeating the pulse sequence if an interference signal is detected on the channel.

2. The method according to claim 1, which comprises:

generating a first pulse sequence comprising at least one pulse as stipulated by the transmission signal and transmitting the first pulse sequence via a first channel;

generating a second pulse sequence comprising at least one pulse with a time offset relative to the first pulse sequence and transmitting the second pulse sequence via a second channel;

if an interference signal is detected on one of the first and second channels, retransmitting the first pulse sequence; and

if an interference signal is detected on one of the second and first channels, retransmitting the second pulse sequence.

3. The method according to claim 1, which comprises, upon detecting an interference signal, transmitting the at least one pulse sequence only after no further interference signal is detected.

4. The method according to claim 1, which comprises, if an interference signal is detected prior to a first transmission of the pulse sequence, holding off transmitting the pulse sequence until after no further interference signal is detected.

5. The method according to claim 1, wherein the transmission signal is a bivalent signal having a first signal level or a second signal level, and the at least one pulse sequence comprises a pulse produced after a change in the signal level.

6. The method according to claim 5, wherein a change in the signal level of the transmission signal from the first signal level to the second signal level involves a positive pulse of the pulse sequence with respect to a reference potential, and

a change in the signal level of the transmission signal from the second signal level to the first signal level involves a negative pulse of the pulse sequence with respect to the reference potential.

7. The method according to claim 5, which comprises:

when the signal level of the transmission signal changes from the first signal level to the second signal level, generating the first pulse sequence with at least one pulse and transmitting the first pulse sequence via the first channel; and

when the signal level of the transmission signal changes from the second signal level to the first signal level, generating the second pulse sequence with at least one pulse and transmitting the second pulse sequence via the second channel.

8. The method according to claim 1, wherein the transmission signal has a first signal level or a second signal level, and the method comprises:

when the signal level of the transmission signal changes from the first signal level to the second signal level, generating a first pulse sequence with a plurality of pulses;

when the signal level of the transmission signal changes from the second signal level to the first signal level, generating a second pulse sequence having a plurality of pulses and differing from the first pulse sequence; and

commonly transmitting the first and second pulse sequences via a common channel.

9. The method according to claim 1, which comprises producing the at least one pulse sequence in dependence on a plurality of transmission signals.

10. The method according to claim 1, which comprises monitoring the channel with a sensor disposed adjacent the channel.

11. The method according to claim 1, which further comprises injecting at least one pulse into the channel at a receiver end, detecting the pulse as an interference signal, and thereby triggering a repetition of the pulse sequence.

12. The method according to claim 1, wherein the transmitting step comprises transmitting the transmission signal via a channel containing a potential barrier.

13. The method according to claim 1, wherein the transmitting step comprises transmitting the transmission signal via a channel containing a magnetic coupling element forming a potential barrier.

14. A transmission apparatus, comprising:

an input terminal for receiving at least one transmission signal, and at least one output terminal to be coupled to a transmission channel;

at least one pulse-generating circuit connected between said input terminal and said output terminal, said pulse-generating circuit having at least one actuating input and generating a pulse sequence with at least one pulse as stipulated by the transmission signal; and

an interference signal detection circuit connected to said pulse-generating circuit, said interference signal detection circuit providing an actuating signal causing the pulse-generating circuit to generate the pulse sequence again as stipulated by the actuating signal.

15. The transmission apparatus according to claim 14, wherein said interference signal detection circuit is connected between said output terminal of the transmission apparatus and said actuating input of said pulse-generating circuit.

16. The transmission apparatus according to claim 14, which comprises a sensor disposed adjacent the transmission channel, and wherein said interference signal detection circuit is connected between said sensor and said actuating input of said pulse-generating circuit.

17. The transmission apparatus according to claim 14, wherein said interference signal detection circuit has a detector circuit, connected to said output terminal of the transmission apparatus, and an actuating-signal-generating circuit, connected downstream of said detector circuit, in a signal flow direction, said actuating-signal-generating circuit providing the actuating signal in dependence on an output signal from said detector circuit.

18. The transmission apparatus according to claim 17, wherein said actuating-signal-generating circuit is configured to also generate the actuating signal in dependence on the at least one pulse sequence.

19. The transmission apparatus according to claim 14, wherein:

said at least one output terminal is one of two output terminals including a first output terminal, for coupling to a

first channel, and a second output terminal, for coupling to a second channel;

said input terminal and said first output terminal having a first pulse-generating circuit connected therebetween, and said input terminal and said second output terminal having a second pulse-generating circuit connected therebetween;

said first output terminal and a control input of said first pulse-generating circuit having a first interference signal detection circuit for providing a first actuating signal connected therebetween; and

said second output terminal and a control input of said second pulse-generating circuit having a second interference signal detection circuit for providing a second actuating signal connected therebetween.

20. The transmission apparatus according to claim 19, wherein at least one of the following is true:

said first pulse-generating circuit is configured to provide the pulse sequence again as stipulated by the first actuating signal and as stipulated by the second actuating signal; and

said second pulse-generating circuit is configured to provide the pulse sequence again as stipulated by the second actuating signal and as stipulated by the first actuating signal.

21. The transmission apparatus according to claim 20, wherein at least one of the following is true:

said first interference signal detection circuit is configured to generate the first actuating signal as stipulated by a second status signal indicating whether or not a second pulse sequence is being transmitted to the second channel; and

said second interference signal detection circuit is configured to generate the second actuating signal as stipulated by a first status signal indicating whether or not a first pulse sequence is being transmitted to the first channel.

22. The transmission apparatus according to claim 14, wherein said at least one pulse-generating circuit is configured to generate the pulse sequence after a prescribed edge of the input signal.

23. The transmission apparatus according to claim 14, wherein said at least one pulse-generating circuit is configured to repeat the pulse sequence after a prescribed edge of the



actuating signal and at a prescribed level of the input signal.

24. A signal transmission assembly, comprising:

a transmission apparatus according to claim 14; and

a receiver apparatus having a receiver coupled to the channel and a driver coupled to the channel and configured to output signals to the channel to be detected in said transmission apparatus as interference signals.